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10/052,464

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Keiichi Iwamura

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EXAMINER

SHIFERAW, ELENI A

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/052,464	<b>Applicant(s)</b> IWAMURA, KEIICHI	
	<b>Examiner</b> ELENI A. SHIFERAW	<b>Art Unit</b> 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 22 is/are pending in the application.
- 4a) Of the above claim(s) 16-17 and 25-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's election without traverse of Group I (claims 1-11 and 22) in the reply filed on 01/31/2007 is acknowledged.
2. Claims 16-17 and 25-26 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/31/2007.
3. Claims 1-11 and 22 are pending, Claims 18-21 and 23-24 are previously cancelled.

### *Response to Arguments/Amendments*

4. Regarding argument Acharya et al. failure to disclose or suggest encryption of partial content and embedding of a digital watermark in the encrypted partial content, and further fails to disclose or suggest decrypting the partial content in which the digital watermark is embedded and combining it with other partial content, page 9 of remark 11/06/2006, are not persuasive because Acharya et al. discloses a method of embedding a watermark into an image (col. 1 lines 14-16). The method comprises compressing image C(F) (col. 4 lines 5-6 and fig. 1; C(F)), encrypting a watermark signal E(B) (col. 4 lines 10-12 and fig. 1; E(B)), dividing E(B) into many bytes  $E(B) = N_0, N_1, N_2, N_3 \dots N_m$  (col. 4 lines 11-19) and embedding divided bytes  $N_i$  of E(B) into C(F) between B(Q) and B(Q+1) (see col. 4 lines 50-65, fig. 1 and col. 3 lines 27-30). Fig. 1 shows the watermark portioned signals  $N_i$  of E(B) is only inserted in selected portion compressed image signal, and/or  $N_0$  encrypted watermark signal  $N_0$  and  $N_1$  are only inserted between BQ<sub>0</sub> and BQ<sub>1+1</sub>, and no bytes of  $N_i$  ( $N_0$  and  $N_1$ ) inserted in B<sub>0</sub>, B<sub>1</sub>, B<sub>2</sub> of the compressed image signal C(F). Therefore the rejection to claims 1-11 and 22 is/are maintained.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6, 10-11, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Acharya et al. USPN 6,449,380 B1.

Regarding claims 1 and 22, Acharya et al. disclose a system/method for embedding a digital watermark in content, comprising:

a segmentation unit configured to segment objective content into a plurality of partial contents (fig. 2 element 110; *C(F) or compressed image blocks/partial contents*);

an encryption unit configured to encrypt at least one partial of the plurality of partial contents obtained by said segmentation means (col. 4 lines 6-18; *E(B)*, *B is selected from the compressed image blocks, B is compressed/divided into blocks and B is encrypted*);

a digital watermarking unit configured to embed a digital watermark to the partial content encrypted by said encryption unit (col. 4 lines 26-65 and fig. 1 *CE(F)*); *encrypted digital watermark is embedded into compressed image (C(F))*);

a decryption unit configured to decrypt the partial content encrypted by said encryption unit and in which the digital watermark is embedded by said digital watermarking unit (col. 5 lines 35-col. 6 lines 4; *recovering encrypted watermark embedded on image data*); and

a composition unit configured to combine the partial content obtained by said decryption unit and other partial content obtained by said segmentation unit (col. 5 lines 64-col. 6 lines 19; *recovering encrypted watermarked blocks  $E(B)$  from compressed unencrypted blocks  $C(F)$  and combining recovered and unencrypted compressed blocks to form original image*).

As per claim 2, Acharya et al. teaches the system, wherein said segmentation unit segments the objective contents on the basis of at least one of a frequency band of the objective contents, a feature of the objective contents, and a type of said digital watermarking unit (col. 2 lines 46-67).

As per claim 3, Acharya et al. teaches the system wherein one apparatus has said respective unit (col. 2 lines 46-col. 3 lines 47).

As per claim 4, Acharya et al. discloses the system wherein said system is formed by a plurality of apparatuses (col. 2 lines 46-col. 3 lines 47).

Regarding claim 5, Acharya et al. discloses the system wherein a first apparatus has said segmentation unit, said encryption unit, said decryption unit and said composition unit, and a second apparatus has said digital watermarking unit (col. 2 lines 46-col. 3 lines 47, and col. 5 lines 35-63; *compressor, encryptor, decryptor, combiner and information embedded*).

As per claim 6, Acharya et al. teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to a purpose of use of the contents (col. 1 lines 17-23; *ownership... rights*).

As per claim 10, Acharya et al. teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to the objective contents (claim 1).

As per claim 11, Acharya et al. teaches the system, wherein said digital watermarking unit embeds a digital watermark by a scheme corresponding to a format of the objective contents (col. 4 lines 18-65).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al. USPN 6,449,380 B1 in view of Kuroda et al. (Kuroda, Patent No.: US 6,707,774 B1).

As per claim 8, Acharya et al. teaches all the subject matter as described above. Acharya et al. fails to teach the system, wherein the purpose of use of the contents includes a process of the objective contents using an apparatus, and

said digital watermarking means embeds a digital watermark corresponding to a type of apparatus used.

However Kuroda discloses wherein the purpose of use of the contents includes a process of the objective contents using an apparatus, and said digital watermarking unit embeds a digital watermark corresponding to a type of apparatus used (Kuroda col. 25 lines 62-col. 26 lines 3).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to embed digital watermark corresponding to a type of apparatus used. One skilled in the art would have been motivated to do so because it would protect digital content from being played/copied/printed on unauthorized type of apparatus.

As per claim 9, Acharya et al. and Kuroda teach all the subject matter as described above. In addition, Kuroda teaches the system, further comprising output unit for outputting the objective contents after digital watermarking in a data format corresponding to the type of apparatus used (Kuroda col. 25 lines 13-27). The rationale for combining are the same as claim 8 above.

9. Claim 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acharya et al. USPN 6,449,380 B1 in view of Zhao et al. USPN 6,141,753.

As per claim 7, Acharya et al. discloses wherein said digital watermarking unit embeds a digital watermark having robustness corresponding to the purpose of use (col. 6 lines 23-47).

Acharya et al. fails to explicitly disclose wherein the purpose of use of the contents includes at least one of a print process and monitor process.

However Zhao et al. teaches the system/apparatus, wherein the purpose of use of the contents includes at least one of a print process and monitor process (col. 4 lines 7-24, col. 7 lines 53-col. 8 lines 32, and fig. 1; *watermarker embedding information to content based on users purchased use information.... UINF indicates how the digital representation may be used/outputted whether it can be displayed, played, printed and etc. and the prices to display and print are different*).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to employ the well-known copyright use information of Zhao et al. within the system of Acharya because it would provide rights protection. One would have been motivated to do so because it would restrict use of content to the amount the user paid and protect unauthorized outputting of content.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO



MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni A. Shiferaw whose telephone number is 571-272-3867. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2136

/Nasser G Moazzami/  
Supervisory Patent Examiner, Art Unit 2136